

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. – SEMESTER 6 • EXAMINATION – SUMMER-2018**

**Subject Code:260002****Date:03/05/2018****Subject Name: Pharmaceutical Microbiology & Biotechnology II****Time: 10:30am to 01:30pm****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|-------------|-----|------------------------------------------------------------------------------------------|-----------|
| <b>Q.1</b>  | (a) | Differentiate i) Active and Passive immunity ii) Exo and Endotoxin.                      | <b>06</b> |
|             | (b) | Write short notes on Diphtheria Toxoid preparation.                                      | <b>05</b> |
|             | (c) | Define: Immunity, Vaccine, Sera, Attenuation, Virulence                                  | <b>05</b> |
| <b>Q.2</b>  | (a) | With a neat flow chart explain the process of Penicillin fermentation.                   | <b>06</b> |
|             | (b) | Write short notes on various carbohydrate and nitrogen sources for fermentation process. | <b>05</b> |
|             | (c) | Give a brief account on primary and secondary screening.                                 | <b>05</b> |
| <b>Q.3</b>  | (a) | Enumerate the methods of recombinant DNA technology.                                     | <b>06</b> |
|             | (b) | Write the method of preparation of Activase using r-DNA technology.                      | <b>05</b> |
|             | (c) | Brief the historical development in the field of biotechnology.                          | <b>05</b> |
| <b>Q.4</b>  | (a) | Explain various techniques of Enzyme immobilization.                                     | <b>06</b> |
|             | (b) | Discuss types of mutations.                                                              | <b>05</b> |
|             | (c) | How mutants are isolated?                                                                | <b>05</b> |
| <b>Q.5</b>  | (a) | Discuss the steps involved in Monoclonal antibody production.                            | <b>06</b> |
|             | (b) | Write short notes on DNA replication.                                                    | <b>05</b> |
|             | (c) | Mention the applications of Monoclonal antibodies.                                       | <b>05</b> |
| <b>Q. 6</b> | (a) | How Viral Vaccines are prepared?                                                         | <b>06</b> |
|             | (b) | Classify immunity with suitable examples.                                                | <b>05</b> |
|             | (c) | Write short notes on diagnostic preparations.                                            | <b>05</b> |
| <b>Q.7</b>  | (a) | Draw a neat labeled diagram of fermentor and functions of the different parts in detail. | <b>06</b> |
|             | (b) | Write short notes on vitamin B <sub>2</sub> fermentative production.                     | <b>05</b> |
|             | (c) | Explain antigen antibody reactions.                                                      | <b>05</b> |

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